STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

December 9, 2006

DAVID P. LITTELL
COMMISSIONER

Mr. Mike Rodrigue
Pioneer Plastics Corporation
1 Pionite Road
Auburn, Maine 04210

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000540
Maine Waste Discharge License (WDL) Application #W007876-5S-F-R
Final MEPDES Permit/WDL

Dear Mr. Rodrigue:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL, which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

Bill Hinkel
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

pc: Stuart Rose, DEP
Lori Mitchell, DEP
Sandy Lao, USEPA
File #7365

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

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106 HOGAN ROAD
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PORTLAND
312 CANCO ROAD
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PRESQUE ISLE
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PRESQUE ISLE, MAINE 04769-2094
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web site: www.maine.gov/dep

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

PIONEER PLASTICS CORPORATION	)	MAINE POLLUTANT DISCHARGE
AUBURN, ANDROSCOGGIN COUNTY	)	ELIMINATION SYSTEM PERMIT
NON-PROCESS AND COOLING WATERS	)	AND
#ME0000540	)	WASTE DISCHARGE LICENSE
#W007876-5S-F-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, §1251, *et seq.*, and Maine law, 38 M.R.S.A., §414-A *et seq.*, and applicable regulations, the Maine Department of Environmental Protection (Department) has considered the application of PIONEER PLASTICS CORPORATION (PIONEER PLASTICS), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

Pioneer Plastics has applied to the Department for the renewal of Waste Discharge License (WDL) #W007876-5S-E-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000540, which was issued on September 24, 2001, and expired on September 24, 2006. The 9/24/01 MEPDES permit authorized the intermittent discharge of non-process waste waters and non-contact cooling waters to the Little Androscoggin River, Class C, in Auburn, Maine.

PERMIT SUMMARY

This permitting action is similar to the 9/24/01 permitting action in that it is:

1. Carrying forward the daily maximum pH range limitation of 6.0 – 8.5 standard units; and

2. Carrying forward acute whole effluent toxicity testing using the water flea once per discharge event.

This permitting action is different from the 9/24/01 permitting action in that it is:

1. Revising the discharge flow monitoring requirement by establishing a daily maximum discharge flow limit of 1.2 million gallons per day (MGD);

2. Revising the prohibition on discharges from when the river flow is at least 23.3 cubic feet per second (cfs) to when the river flow is at least 75 cfs;

3. Revising the sliding scale total copper effluent concentration limitation by establishing a single, numeric, water quality-based daily maximum concentration limit;

4. Establishing a water quality-based, daily maximum total copper effluent mass limit;

5. Eliminating the daily maximum effluent concentration limit for phenol based on a Department best professional judgment of the need to regulate this compound;

6. Eliminating the receiving water temperature monitoring and the sliding scale temperature differential limit based on an evaluation of potential thermal impacts associated with the discharge;

7. Revising the daily maximum effluent temperature reporting requirement by establishing a numeric limitation of 78°F;

8. Revising the procedure for cooling pond discharge (Special Condition D of this permit); and

9. Eliminating the Treatment Plant Operator condition imposed by the previous permitting action.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated December 8, 2006, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of PIONEER PLASTICS CORPORATION to discharge a daily maximum of up to 1.2 million gallons per day (MGD) of non-process waste waters and non-contact cooling waters, on an intermittent basis and when the receiving water flow is at least 75 cubic feet per second, to the Little Androscoggin River, Class C, in Auburn, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. The expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 11TH DAY OF December, 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 11, 2006
Date of application acceptance: May 22, 2006

FILED
DEC 12 2006
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0000540 / #W007876-5S-F-R December 8, 2006

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **non-process waste waters and non-contact cooling waters via Outfall #002A** to the Little Androscoggin River at Auburn. Such discharges shall be limited and monitored by the permittee as specified below[1] [2]:

Effluent Characteristic	Discharge Limitations		Minimum Monitoring Requirements	
	Daily Maximum as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Flow *[00056]*	1.2 MGD *[03]*	---	When Discharging *[WH/DS]*	Calculate *[CA]*
Discharge Duration *[81381]*	Report Total Hours *[8A]*	---	Once/Discharge *[01/DS]*	Record *[RC]*
Total Copper *[01042]*	0.96 lbs./day *[26]*	144.3 µg/L *[19]*	When Discharging *[WH/DS]*	Composite[4] *[CP]*
Effluent Temperature *[00011]*	78°F *[15]*	---	Twice/Discharge *[02/DS]*	Measure *[MS]*
pH *[00400]*	6.0 – 8.5 SU *[12]*	---	Twice/Discharge *[02/DS]*	Recorder *[RC]*
Whole Effluent Toxicity [3] (A-NOEL) Water Flea *[TDA3B]*	Report % *[23]*	---	When Discharging *[WH/DS]*	Composite[4] *[CP]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 6 and 7 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

1. **Sampling** – Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. All effluent samples collected for compliance demonstration purposes shall be collected at the pump house, so called, located at the edge of the Little Androscoggin River.

   All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit.

2. **River Flow Restricted Discharge** – The permittee is not authorized to discharge when the receiving water flow rate is less than 75 cubic feet per second as measured at United States Geological Survey (USGS) river gage #01057000 (Little Androscoggin River near South Paris, Maine), or other methods approved in writing by the Department.

3. **Whole Effluent Toxicity (WET)** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute threshold of 2.4%), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. This permitting action is not establishing chronic WET testing based on the intermittent nature of the discharge and Department best professional judgment that the discharge does not exhibit chronic effects on the receiving water. The critical acute threshold was derived as the mathematical inverse of the applicable acute dilution factor of 41.4:1.

   The permittee shall initiate A-NOEL WET testing at a minimum frequency of once per discharge event using the water flea (*Ceriodaphnia dubia*). The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute water quality threshold.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual).

b. U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, 4th ed. EPA 821-R-02-013. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the freshwater chronic method manual).

Results of WET tests shall be reported on the "WET Results Report – Fresh Waters" form included as Attachment A of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the parameters specified on the "WET and Analytical Chemistry Results – Fresh Waters" form included as Attachment B of this permit each time a WET test is performed.

4. **Composite Samples** – Composite samples collected for total copper and WET testing shall be comprised of eight (8) grab samples collected at equal intervals over the course of a single discharge event. The permittee shall combine all grab samples to form a composite for laboratory analysis.

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharge shall not cause visible discoloration or turbidity in the receiving waters, which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

SPECIAL CONDITIONS

C. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #002A and only when the river flow is at least 75 cfs. Discharges of wastewater from any other point source that are not authorized under this or another Department permit shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

D. PROCEDURE FOR COOLING POND DISCHARGE

1. **At least two weeks prior to discharge and at a minimum frequency of twice per week,** the permittee shall:

   a. Monitor and record the cooling pond waters for the following parameters: total copper, temperature, pH, and water treatment additives (corrosion inhibitors, oxygen scavengers, etc.) used within the previous 30 days in any process contributing waste water flows to the cooling pond.

   b. Mail or fax written notice to the Department assigned facility inspector that a discharge is scheduled, and provide results of testing as specified in Special Condition D.1.a. of this permit as soon as they become available.

   c. Notify the Department as to whether or not biocides, or the equivalent, have been used within the previous 60 days in any process contributing waste water flows to the cooling pond. The Department may require additional monitoring or testing prior to discharge, at its discretion, for any chemical or compounds that may be present in the cooling pond waters.

2. **Upon termination of the discharge** (the point at which the gravity fed discharges ceases), the permittee shall cover/plug the outlet pipe(s) in the cooling pond to ensure that any residual water and sludge remaining in the pond is not discharged to the river. Any residual water or sludge removed from the pond shall be properly disposed of as solid waste in accordance with applicable Department rules and Maine laws.

E. NOTIFICATION REQUIREMENTS

In accordance with Standard Condition D, the permittee shall notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants to the system at the time of permit issuance.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and
   b. Any anticipated impact of the change in the quantity or quality of the waste water to be discharged from the treatment system.

SPECIAL CONDITIONS

F. MONITORING AND REPORTING

Monitoring results obtained during the previous calendar quarter shall be summarized for each calendar quarter and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the Department assigned inspector (unless otherwise specified by the Department) at the following address:

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
312 Canco Road
Portland, Maine 04103

G. OPERATIONS AND MAINTENANCE (O&M) PLAN

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

SPECIAL CONDITIONS

H. REOPENING OF PERMIT FOR MODIFICATION

Upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

I. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ mm/dd/yy Date Tested _____ mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results **% effluent**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
	A>90	C>80	>15/female	A>90	C>80	> 2% increase
QC standard						
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "WET and Analytical Chemistry Results - Fresh Waters, December 2005."

ATTACHMENT B

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WET AND ANALYTICAL CHEMISTRY RESULTS
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate and complete.

Date Collected _____ mm/dd/yy Date Analyzed _____ mm/dd/yy

Lab ID No. _____ Actual Daily Flow _____ MGD Actual Monthly Average Flow _____ MGD

	Analyte	Report Units	Receiving Water Results	Effluent Results	Reporting Level	Method
Analytes Required for Analytical Chemistry	Ammonia nitrogen	µg/L	*		µg/L	
	Total aluminum	µg/L	*		µg/L	
	Total arsenic	µg/L	*		µg/L	
	Total cadmium	µg/L	*		µg/L	
	Total chromium	µg/L	*		µg/L	
	Total copper	µg/L	*		µg/L	
	Total cyanide	µg/L	*		µg/L	
	Total lead	µg/L	*		µg/L	
	Total nickel	µg/L	*		µg/L	
	Total silver	µg/L	*		µg/L	
	Total zinc	µg/L	*		µg/L	
	Total hardness	mg/L	*		mg/L	
	Total residual chlorine **	mg/L			mg/L	
Additional Analytes Required For WET Chemistry	Alkalinity	mg/L	*		mg/L	
	Total magnesium	mg/L	*		mg/L	
	Total Calcium	mg/L	*		mg/L	
	Total organic carbon	mg/L	*		mg/L	
	Total solids	mg/L			mg/L	
	Total suspended solids	mg/L			mg/L	
	Specific conductivity	µmhos			µmhos	
	pH **	S.U.	*		S.U.	

* Except for Total Suspended Solids, Total Solids and Conductivity, the receiving water chemistry tests are optional. However, samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.
** WET laboratories may conduct these tests on composite samples as part of their procedures.

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

Company Telephone # _____

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **DECEMBER 8, 2006**

PERMIT NUMBER: **#ME0000540**
WASTE DISCHARGE LICENSE: **#W007876-5S-F-R**

NAME AND ADDRESS OF APPLICANT:

PIONEER PLASTICS CORPORATION
1 PIONITE ROAD
AUBURN, MAINE 04210

COUNTY: **ANDROSCOGGIN**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

PIONEER PLASTICS CORPORATION
1 PIONITE ROAD
AUBURN, MAINE 04210

RECEIVING WATER/CLASSIFICATION: **LITTLE ANDROSCOGGIN RIVER/CLASS C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. MIKE RODRIGUE**
(207) 689-9340

1. APPLICATION SUMMARY

Application: Pioneer Plastics Corporation (Pioneer Plastics) has applied to the Department of Environmental Protection (Department) for the renewal of Waste Discharge License (WDL) #W007876-5S-E-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000540, which was issued on September 24, 2001, and expired on September 24, 2006. The 9/24/01 MEPDES permit authorized the intermittent discharge of non-process waste waters and non-contact cooling waters to the Little Androscoggin River, Class C, in Auburn, Maine.

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 9/24/01 permitting action in that it is:**

1. Carrying forward the daily maximum pH range limitation of 6.0 – 8.5 standard units; and

2. Carrying forward acute whole effluent toxicity testing using the water flea once per discharge event.

This permitting action is different from the 9/24/01 permitting action in that it is:

1. Revising the discharge flow monitoring requirement by establishing a daily maximum discharge flow limit of 1.2 million gallons per day (MGD);

2. Revising the prohibition on discharges from when the river flow is at least 23.3 cubic feet per second (cfs) to when the river flow is at least 75 cfs;

3. Revising the sliding scale total copper effluent concentration limitation by establishing a single, numeric, water quality-based daily maximum concentration limit;

4. Establishing a water quality-based, daily maximum total copper effluent mass limit;

5. Eliminating the daily maximum effluent concentration limit for phenol based on a Department best professional judgment of the need to regulate this compound;

6. Eliminating the receiving water temperature monitoring and the sliding scale temperature differential limit based on an evaluation of potential thermal impacts associated with the discharge;

7. Revising the daily maximum effluent temperature reporting requirement by establishing a numeric limitation of 78°F;

8. Revising the procedure for cooling pond discharge (Special Condition D of this permit); and

9. Eliminating the Treatment Plant Operator condition imposed by the previous permitting action.

b. History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed for Pioneer Plastics.

August 30, 1995 – The USEPA issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0000540 to Pioneer Plastics Corporation. The 8/30/95 permit superseded the NPDES permit issued to this facility by the USEPA on December 20, 1974 (earliest NPDES permit on file with the Department).

2. PERMIT SUMMARY (cont'd)

January 12, 2001 – The Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program.

September 24, 2001 – The Department issued WDL #W007876-5S-E-R / MEPDES permit #ME0000540 to Pioneer Plastics for a five year term. The 9/24/01 permit superseded WDL Modification #W007876-57-C-M issued on May 22, 1997 and previous WDLs and WDL Transfers.

October 31, 2005 – Pioneer Plastics submitted to the Department, for review and acceptance, a Notice of Intent (NOI) to Comply with the Maine Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activity. The NOI was assigned #MER05B360.

May 11, 2006 – Pioneer Plastics Corporation submitted a timely and complete General Application to the Department for renewal of the 9/24/01 MEPDES permit. The application was accepted for processing on May 22, 2006 and was assigned WDL #W007876-5S-F-R / MEPDES #ME0000540.

c. Source Description: Pioneer Plastics manufactures high pressure decorative laminates, treated papers and specialty resins. The manufacturing process requires cooling waters to cool critical plant equipment. Pioneer Plastics utilizes a 130-foot by 160-foot by 8-foot deep concrete structure as a reservoir for a closed loop cooling system. Water is drawn from the Little Androscoggin River and pumped to the cooling water pond and then distributed to various manufacturing processes for cooling presses in the press room and reactor vessels and scrubber rollers in the specialty resins room. In addition to river water, municipal water is utilized at the facility for product manufacturing and make-up water for steam production in the facility boilers. Cooling waters are recycled through the cooling water pond and distributed through a series of spray nozzles in the pond to dissipate the heat in the water to the atmosphere.

Daily cooling water sources include: river make-up water for the cooling pond reservoir; blowdown and make-up waters from the facility's boilers; steam condensate from presses/reactors; and from critical equipment components such as mechanical seals and optical sensors. Although the facility cooling water system is a closed loop system, the cooling water pond and internal cooling system must be periodically taken off-line for inspection or routine maintenance. Intermittent cooling waters associated with the shutdown include bleeding off internal systems that include steam condensate and hot water from the accumulators, make-up water from the boilers, reactors, and presses, and waters from the chilled water system.

2. PERMIT SUMMARY (cont'd)

Approximate volumes are as follows:

Contributing Flow	Volume (gallons)
Stream condensate/hot water from the accumulators	66,300
Water discharged from boilers	8,820
Water discharged from reactors and presses	10,000
Water discharged from closed cooling loop	10,000
Water discharged from chilled water system	1,000

In order to maintain heat transfer efficiency in the facility's boilers, Pioneer Plastics adds chemicals to the make-up water for neutralization, oxygen scavenging, scaling prevention and maintaining the proper levels of alkalinity. Pioneer Plastics also utilizes a biocide and corrosion inhibitors to prevent biological growth and corrosion in the system.

A map created by the Department showing the location of the Pioneer Plastics facility and the receiving waters is included as Fact Sheet Attachment A.

All manufacturing process and sanitary wastewaters generated at Pioneer Plastics are conveyed to the Lewiston-Auburn Water Pollution Control Association (LAWPCA) located in Lewiston. It is noted that the permittee reported their request to convey cooling pond waste waters to LAWPCA as an alternative to direct discharge to the river was not accepted. Cooling pond discharges are typically performed in the spring of the yerar which coincides with periods of high flows to publicly owned treatment facilities, and for certain facilities, discharges from combined sewer overflow points.

d. Wastewater Treatment: Pioneer Plastics does not provide a formal level of treatment to the wastewaters. Rather, the facility implements operational constraints before discharging to the receiving water.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. §414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., §420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467 sub§(1)(B)(1)(b) classifies the Little Androscoggin River, main stem, from the Maine Central Railroad bridge in South Paris to its confluence with the Androscoggin River, which in clued the river at the point of discharge as Class C waters. Maine law, 38 M.R.S.A., Section 465(4) describes the standards for Class C waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 24.5-mile reach of the Little Androscoggin River below the State Route 121 bride in Oxford (Hydrologic Unit Code #ME0104000209 / Waterbody ID #417R) as, *"Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses."* The Report lists all of Maine's fresh waters as, *"Category 4-B-3: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL may be Required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"the impairment is presumed to be from atmospheric contamination and deposition. The advisory is based on probability data that a stream, river, or lake may contain some fish that exceed the advisory action level. Any freshwater may contain both contaminated and uncontaminated fish depending on size, age and species occurrence in that water."*

The Department has no information at this time that the discharge from Pioneer Plastics causes or contributes to the failure of the receiving water to meet the designated uses of its ascribed classification.

5. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a daily maximum sliding scale discharge flow limitation in terms of cubic feet per second (cfs) based on a maximum discharge of 1.34 million gallons (MG) from the cooling pond and variable discharge duration. The previous permit required Pioneer Plastics to select a target discharge flow rate and discharge duration based on pre-discharge concentration levels of total copper in the cooling pond, the temperature differential between the cooling pond and the receiving water, and the volume of water to be discharged. The previous permitting action required Pioneer Plastics to report the actual discharge flow rate achieved in the field on the Discharge Monitoring Reports (DMRs).

This permitting action is establishing a daily maximum discharge flow limitation of 1.2 million gallons per day based on the maximum discharge rate proposed by the permittee, and is utilizing this flow limit to calculate applicable discharge limitations for total copper, phenols and temperature. The previous permitting action specified that effluent samples taken for compliance demonstration purposes must be collected at the pump house located at the edge of the Little Androscoggin River, which is being carried forward in this permitting action. The pump house is the last point of contact before the effluent is discharged into the receiving water.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

The previous permit prohibited the discharge if the river flow rate was below 23.3 cubic feet per second (cfs), corresponding to the lowest 1-day average flow that occurs (on average) once every 10 years (1Q10), which was calculated by the Department based on the drainage area contributing flows to the Little Androscoggin River at the point of discharge. This permitting action is revising the discharge prohibition to a minimum stream flow of 75 cfs as measured at United States Geological Survey (USGS) gage #01057000, or other method approved in writing by the Department.

A review of the daily maximum discharge flow data as reported on the DMRs submitted to the Department for the period June 2001 – May 2006 indicates that Pioneer Plastics has discharged wastewater one time during the specified period. Pioneer Plastics reported on its April 2004 DMR and in supplemental reporting documents that the facility had discharged at a maximum rate of 2.58 cfs, but that the average discharge over the 23-hour discharge duration was less than 1 cfs. Pioneer Plastics reported a total discharge of 615,492 gallons to the Little Androscoggin River on April 9, 2004.

b. Dilution Factors: The acute dilution factor associated with the daily maximum discharge of 1.2 MGD at a minimum stream flow of 75 cubic feet per second (cfs) was derived in accordance with Department rule, 06-096 CMR, Chapter 530 Section 4.A *Surface Water Toxics Control Program.* Due to the intermittent nature of the discharge (historically once every 4-5 years) and short discharge duration (historically for less than 48 hours), the Department is regulating the discharge for acute effects on the receiving water. By prohibiting discharges when the river flow is below 75 cfs, this permitting action ensures that, following a reasonable opportunity for dilution with the receiving waters, the effluent limits for total copper, phenol, and temperature will not exceed the critical acute water quality-based thresholds for the Little Androscoggin River. With a prohibition on discharges when river flow is less than 75 cfs, the acute dilution factor was derived as follows:

River Flow = 75 cfs $\Rightarrow \dfrac{(75\text{ cfs})(0.6464) + 1.2\text{ MGD}}{1.2\text{ MGD}} = 41.4{:}1$

c. Temperature: The previous permitting action established a daily maximum sliding scale temperature differential limitation (between the receiving water temperature and the effluent temperature) in terms of degrees Fahrenheit (°F) to ensure that the discharge conformed to the requirements of Department rule Chapter 582, *Regulations Relating to Temperature.* Department rule Chapter 582, *Regulations Relating To Temperature,* limits thermal discharges to an in-stream temperature increase (ΔT) of 0.5°F above the ambient receiving water temperature when the weekly average temperature of the receiving water is greater than or equal to 66° F or when the daily maximum temperature is greater than or equal to 73° F. The temperature thresholds are based on EPA water quality criterion for the protection of brook trout and Atlantic salmon. The weekly average temperature of 66°F was derived to protect for normal growth of the brook trout and the daily maximum threshold temperature of 73° F protects for the survival of juveniles and adult Atlantic salmon during the summer months. The Department interprets the term "weekly average temperature" to mean a seven (7) day rolling average.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

To promote consistency, the Department also interprets the ΔT of 0.5° F as a weekly rolling average criterion when the receiving water temperature is ≥66° F and <73° F.

The assimilative capacity of the Little Androscoggin River (thermal load that would cause the stream to increase by 0.5°F) at a stream flow of 75 cfs can be calculated as follows:

$$(75 \text{ cfs})(0.6464)(0.5°F)(8.34 \text{ lbs/day})(10^6 \text{ gallons}) = 2.0 \times 10^8 \text{ Btu/day}$$

A review of supplemental reporting documents submitted to the Department by the permittee indicates the cooling pond temperature measured immediately prior to the permittee's April 2004 discharge (only discharge between calendar years 2001 and 2006) was 62°F.

Based on the data cited above, the Department is establishing a best professional judgment daily maximum temperature limit of 78°F. Due to the intermittent nature of the discharge and short-term discharge duration, the Department is regulating temperature associated with this discharge as an acute effect.

When the receiving water is >73°F, the in-stream temperature difference of 0.5°F is a daily maximum limit thus, the thermal heat load based on a daily maximum flow of 1.2 MGD at 78°F can be calculated as follows:

$$(1.2 \text{ MGD})(78°F - 73°F)(8.34 \text{ lbs/gal})(10^6) = 5.0 \times 10^7 \text{ Btu/day}$$

The calculated thermal heat load using the maximum discharge flow rate and temperature is lower than the assimilative capacity of the river. Therefore, compliance with the daily maximum effluent temperature limitation of 78°F ensures that the discharge will not cause an in-stream temperature increase (ΔT) of 0.5°F above the ambient receiving water temperature. The calculation above is an example of thermal loading based on worst case scenarios for both the ambient receiving water and discharge from Outfall #002A. It is noted the Department determines compliance based on actual ambient receiving water flows and temperatures and actual discharge flows and temperatures.

This permitting action is eliminating the daily maximum temperature differential limitation and ambient river temperature monitoring based on this evaluation.

d. Total Copper: The previous permitting action established a daily maximum sliding scale (ranging from 8 to 96 hours in 8-hour increments) concentration limitation for total copper based on the ambient water quality criteria (AWQC), a maximum discharge volume of 1.34 million gallons, and the sliding scale dilution factors associated with the discharge. A total copper limit was established based on the anticipated presence of this metal in the effluent. It is noted that on October 9, 2005, a new Department rule, Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, became effective. Chapter 584 establishes an acute, freshwater ambient water quality criterion of 3.07277 µg/L

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

(0.00307277 mg/L) for copper, which is more stringent than the previous acute AWQC copper criterion of 3.8907 µg/L.

Department rule Chapter 530 Section 4.C. requires that the background concentration of specific chemicals must be included in all calculations based on a published list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations. The Department has not published site-specific background copper values for the receiving water, the Little Androscoggin River. Therefore, this permitting action assumes the default 10% of applicable AWQC in calculating effluent limitations for priority pollutants, which is illustrated in the calculations below. Additionally, Department rule Chapter 530 Section 4.E. requires the Department to hold a portion of the total assimilative capacity for toxic pollutants in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The water quality reserve must not be less than 15% of the total assimilative quantity. The Department has not assigned specific allocations for dischargers to the Little Androscoggin River. Therefore, this permitting action reserves the default value of 15% of the total assimilative capacity in calculating effluent limitations for priority pollutants, which is illustrated in the calculations below. This permitting action is establishing a single, end-of-pipe (EOP), water quality-based, daily maximum concentration limit for total copper based on a daily maximum discharge flow rate of 1.2 MGD, an acute dilution factor of 41.4:1, as calculated in Section 5.b. of this fact sheet, and an acute AWQC of 3.07277 µg/L as follows:

EOP Concentration Threshold = (Dilution Factor)[(0.75)(criterion)] + (0.25)(criterion)

EOP Daily Maximum Concentration Threshold =
(41.4)[(0.75)(3.07277 µg/L)] + (0.25)(3.07277 µg/L) = 96.2 µg/L

Department rule Chapter 523(6)(f) states that all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass. Therefore, this permitting action is establishing a daily maximum total copper mass limitation as follows:

EOP Copper Mass Limit = (EOP Conc. Threshold)(8.34 lbs./gallon)(discharge flow limit, MGD)

Daily Max. EOP Copper Mass Limit =

$$\frac{(96.2\ \mu g/L)(8.34\ lbs./gallon)(1.2\ MGD)}{1000\ \mu g/mg} = \mathbf{0.96\ lbs./day}$$

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Pursuant to Department rule Chapter 530.3.D(1), and so as not to penalize the permittee for operating at flows less than the permitted flow, the Department is establishing concentration limits based on a factor of 1.5 as follows:

EOP Copper Concentration Limit = (EOP Concentration Threshold)(1.5)

Daily Maximum EOP Copper Concentration Limit = (96.2 µg/L)(1.5) = **144.3 µg/L**

e. Phenol: The previous permitting action established a daily maximum concentration limitation of 2.56 mg/L for phenol based on the chronic AWQC as Pioneer Plastics reported on USEPA form 3510-1, dated March 27, 1981, that these compounds were believed present in the effluent.

Pioneer Plastics reported in supplemental reporting documents to the April 2004 Discharge Monitoring Report (DMR) that the sample bottle used for the phenol monitoring requirement broke in storage prior to shipment to the analytical laboratory and was therefore not available for analysis. The permittee indicated that the pre-discharge level of phenol was analyzed and indicated a concentration level of 0.125 mg/L.

This permitting action is evaluating the need to regulate the discharge of phenol from the cooling pond based on a daily maximum discharge flow rate of 1.2 MGD, an acute dilution factor of 41.4:1, as calculated in Section 5.b. of this fact sheet, and an acute AWQC of 10,200 µg/L as follows:

The end-of-pipe (EOP), water quality-based, daily maximum concentration threshold for phenol may be calculated using the equations provided above for total copper as follows:

EOP Daily Maximum Concentration Threshold =
(41.4)[(0.75)(10,200 µg/L)] + (0.25)(10,200 µg/L) = 319,260 µg/L

The pre-discharge level of phenol in the cooling pond prior to the April 2004 discharge event was 0.125 mg/L (125 µg/L). This value is more than three orders of magnitude lower than the critical acute water quality threshold of 319,260 µg/L. Therefore, the Department is eliminating the numeric effluent limitation for phenol based on a best professional judgment that the discharge does not exhibit a reasonable potential to exceed the critical threshold.

f. pH: The previous permitting action established a pH range limitation of 6.0 – 8.5 standard units (SU), which is considered by the Department as a best practicable treatment standard and is being carried forward in this permitting action. This permitting action is carrying forward the minimum monitoring frequency requirement of twice per discharge event.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

A review of the daily maximum temperature differential data as reported on the DMRs submitted to the Department for the period June 2001 – May 2006 indicates that Pioneer Plastics has discharged wastewater one time during the specified period. Pioneer Plastics reported on its April 2004 DMR and in supplemental reporting documents that the April 2004 discharge was in compliance with the pH range limitation.

g. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, Surface *Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

The previous licensing action established acute WET testing to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. (Chronic WET testing was not required due to the intermittent nature and short-term duration of the discharge.) Acute WET tests are performed on the invertebrate water flea (*Ceriodaphnia dubia*).

Chapter 530 Section (2)(A) specifies the dischargers subject to the rule as, *"all licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria."* The Department established acute WET testing at a frequency of once per discharge event based on best professional judgment (BPJ) that the effluent "may have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria", and this permitting action is carrying forward acute WET testing on the same BPJ basis.

A review of the WET data submitted to the Department for the permittee's April 2004 discharge event does not demonstrate a reasonable potential to exceed the critical acute threshold of 2.4% (mathematical inverse of the acute dilution factor of 41.4:1).

This permitting action addresses all known pollutants consistent with Section 2.D.4 of the toxics rule, and the Department has determined that priority pollutant, analytical chemistry, and chronic WET testing for Outfall #002A is not warranted at this time.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

This permit provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment, and receiving water characteristics.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class C classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Sun Journal* newspaper on or about May 10, 2006. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from, and written comments sent to:

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Bureau of Land & Water Quality
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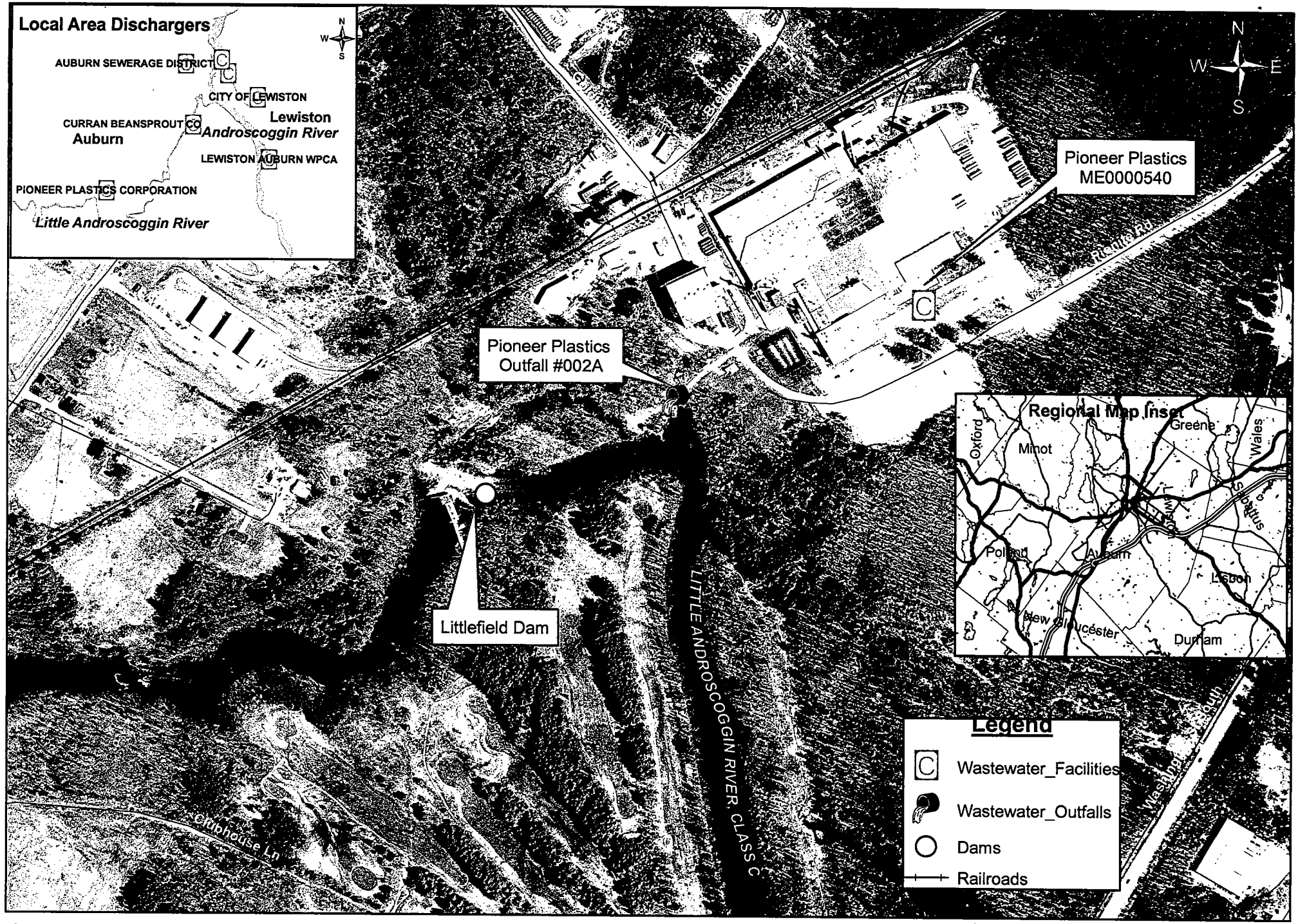
10. RESPONSE TO COMMENTS

During the period of November 7, 2006 through December 6, 2006, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to Pioneer Plastics for the proposed discharge. The Department received no significant comments on the proposed draft permit, therefore, a response to comments was not prepared.

ATTACHMENT A



Pioneer Plastics on Little Androscoggin River, Auburn, Maine

Map created by Maine DEP
May 17, 2006